



Revision of the genus *Diariptus* Stål (Hemiptera: Heteroptera: Coreidae: Meropachydinae: Spathophorini)

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Abstract

A new species of the genus *Diariptus* belonging to the coreid tribe Spathophorini is described from Ecuador under the name *D. napoanus* n. sp. Redescription of the genus, diagnoses for males and females as well as illustrations, new distributional records, and a key to *Diariptus* taxa are provided. *Diariptus nigridens* Stål is synonymized under *D. hexacanthus* Stål.

Key words:

Introduction

Diariptus is a neotropical genus, distributed in Brazil and Ecuador, and was erected by Stål (1859) on the basis of a male specimen from Brazil, which he named *Diariptus hexacanthus* (NHRS). Subsequently Stål (1870) described a second species, from a female also collected in Brazil and which he named *Diariptus nigridens* (NHRS). The two species were separated according to the development of the posterior angle of the connexival segments IV to VI, which in *D. hexacanthus* extend as a long and sharp spine pointing out and back, whereas on *D. nigridens* it extends as a short tubercle. Lethierry and Severin (1894) included *Diariptus* in their catalogue. After that, references to *Diariptus* are scarce. The genus was included by Kormilev (1954) within the Meropachydinae tribe Spathophorini, and Brailovsky and Barrera (1998) in their key to genera of Spathophorini.

The study of a large series of specimens of *Diariptus* corroborated the presence of sexual dimorphism in the genus, whereby males have a long spine on connexival segments IV to VI and females have only a tubercle; therefore, *D. nigridens* is hereby synonymized under *D. hexacanthus*. Also in this paper the genus is redescribed, one new species is described from Ecuador, the previously known species is redescribed, with supplemental distributional records, and a key to known taxa is included.

Material and methods

The following abbreviations are used for the institutions cited here: American Museum of Natural History, New York, USA (AMNH); California Academy of Sciences, San Francisco, California, USA (CASC); Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, USA (CMNH); National Museum of Natural History, Paris, France (MNHN); Zoological Museum, Universidade de São Paulo, São Paulo, Brazil (MZSP); Naturhistoriska Riksmuseet, Stockholm, Sweden (NHRS); Entomological Collection, Instituto de Biología,

Measurements are given in millimeters.

Results

Diariptus Stål

Diariptus Stål, 1859: 452.

Redescription. Body elongate, parallel-side. Head. Wider than long, pentagonal, nondeclivent, dorsally flat; tylus unarmed, apically globose, raised, extending anterior to and higher laterally than juga; juga unarmed; space between antenniferous tubercles filled by tylus, and space between them almost equal to width of one tubercle; antenniferous tubercles unarmed, border entire, continuous, almost semicircular, prominent; side of head anterior to eye unarmed; antennal segment I robust, cylindrical, thickest, slightly curved outward, longer than head; segments II and III cylindrical, slender, and IV fusiform; antennal segment III shortest, II shorter than I, and I longer or shorter than IV; ocelli close to eyes; preocellar pit obliquely deep; eyes hemispheric, protuberant, upper margin located at same level or above vertex and frontal area; postocular tubercle indistinct; mandibular plate absent; buccula squarish, raised, short, entire, not projecting beyond antenniferous tubercles, meeting posteriorly; rostrum reaching posterior margin of prosternum; rostral segment III shortest, I longest, and II subequal or shorter than IV; ventral surface below, and behind buccula without tubercle. Thorax. Pronotum. Wider than long, trapeziform, slightly declivent, with posterior border subequal to base of scutellum in width; collar wide; anterior margin smooth, curved; frontal angles produced forward as a short or bifid tubercle; humeral angles slightly exposed, obtuse; anterolateral margins obliquely straight, uniformly nodulose; posterolateral margin sinuate, smooth; triangular process broad, subtriangular; posterior border straight, smooth; pronotal disk abruptly punctuate, transversely striate. Prosternum deeply concave, posterior third in front of the area between fore legs produced into narrow, acute projection; mesosternum flat, anterior third in front of the area between fore legs, raised into broad and blunt keel, posterior third between middle legs raised into squarish plate, laterally projected into two short and robust arms; metasternum wide, rectangular, anterior border bifid, each tubercle small, broad, blunt, close to mesocoxae; mesosternal arms facing one-to-one to metasternal anterior tubercles; posterior border of metasternum straight, entire; propleura and mesopleura punctate, anterior margin raised into short tuberculate plate; metapleura punctate, flat; metathorax laterally expanded, in dorsal view with metapleura, including meta-acetabulae visible; metathoracic peritreme located near lower margin of metapleuron, bifid, anterior and posterior lobe earlike, and almost same size; evaporative area well developed. Legs. Hind coxae separated, distance between them 1.4 to 1.8 times diameter of one coxa, and apically with broad and blunt tubercle, located on external surface; fore and middle femora relatively slender, ventrally armed with two rows of short and acute spines, or blunt tubercles; hind femur remarkably incrassate (less in females), attaining posterior third of abdominal sternite V; dorsal surface with three rows of blunt tubercles, and one row of strong and acute spines, running from base to apex, and ventrally armed with two rows of strong spines running from base to apex; fore and middle tibiae unarmed, sulcate, widened distally; male hind tibia flattened, almost same size as length of hind femur, basal portion conspicuously curved (in females weakly curved), outer margin sulcate, not expanded, inner margin not expanded, armed with one row of acute spines, running from middle third to apex, including a broad and large spine near middle third, and one acute spine at distal third. Scutellum.- Longer than wide or wider than long, triangular, shorter than clavus, with wide transversal depression near middle third; disk without triradiate ridge; apex rounded to subacute, raised; lateral margins emarginated. Hemelytra.- Macropterous, reaching posterior margin or apex of last abdominal segment; clavus and claval suture not covered by scutellum; costal margin emar-

ginated; apical margin obliquely straight, with apical angle narrowly, very long, extending beyond middle third of hemelytral membrane. Abdomen.- Parallel-side, gradually narrowing; connexivum scarcely higher than tergum; male connexival segments sulcate, with outer margin of segments II, III and VII unarmed, and IV to VI unarmed or uniformly nodulose, and inner margins of segments II, III and VII unarmed, and IV to VI uniformly nodulose; male posterior angle of outer connexival segments II and III unarmed, and IV to VII unarmed or with short and broad tubercle; inner connexival segments II and III projected into short and broad spine, segment VII entire, without spine or tubercle, segments IV and V with large and acute spine directed outward and slightly backward, and segment VI with medium size and acute spine directed outward and slightly backward; female connexival segments sulcate, outer and inner margins II to VII unarmed; female posterior angle of outer connexival segments II to VII unarmed, and inner connexival segments II to VI projected into short and broad tubercle, and VII unarmed; abdominal sterna without medial furrow; abdominal spiracle III to VII subelliptical and closer to anterior border; abdominal sternite II visible. Integument.- Body surface rather dull, and including antennal segments and legs sparsely clothed with short decumbent to suberect setae; head, pro-, meso-, and metasternum, connexival segments, and abdominal sterna impunctate; acetabulae, pro-, meso-, and metapleura, clavus, and corium densely to finely punctate; pronotal disk densely punctate and striate; scutellum smooth to finely punctate, with apex yellowish cream. Male genital capsule.- Posteroventral edge with deep and wide U-shaped excavation, delimited by a pair of raised sinuate arms, one on each side; midpoint protruding as a large squarish plate, with lateral angles tuberculate (Fig. 3). Female genital plates.- Abdominal sternite VII with plica and fissure; plica narrowed, hard to see; gonocoxae I enlarged dorsoventrally, inner and upper margin rounded, in caudal view closed; paratergite VIII triangular, spiracle visible; paratergite IX squarish, longer than paratergite VIII, in caudal view with inner third contiguous.

Comments. *Diariptus* Stål, 1859, resembles *Allopeza* Bergroth, 1912 in general aspects; these genera have the antennal segments II and III cylindrical, not apically dilated; body length shorter than 27 mm; posterior border of pronotum with triangular process; space between antenniferous tubercles filled by tylus; and humeral angles slightly exposed, obtuse, and never produced laterally into winglike expansions. *Diariptus* is distinguished by having the posterior angle of the inner connexival segments IV to VI of males projected into large and acute spine, directed outward and slightly backward, and in females projected into short and broad tubercle; the hind femur gradually incrassate from base toward apex; the fore and middle femora dorsally smooth; and the buccula quadrate, and conspicuously raised. In *Allopeza* the posterior angle of inner connexival segments IV to VI of both sexes are unarmed; the hind femur strongly clavate, swollen distally, with proximal half slender; the fore and middle femora dorsally granulate from base to apex; and buccula enlarged anteroposteriorly, and scarcely raised.

Key to the species of *Diariptus*

1. Scutellum longer than wide; male connexival segments IV-V with posterior angle drawn into long spine perpendicular to abdominal margin and rather slender (Fig. 5); abdominal sterna III-VII without reddish orange stripe..... *D. hexacanthus* Stål (Brazil)
2. Scutellum wider than long; male connexival segments IV-V with posterior angle out into remarkable long spine almost perpendicular to abdominal margin and rather robust (Fig. 4); abdominal sterna III-VII lateral to midline and below abdominal spiracle with wide reddish orange stripe.....
..... *D. napoanus* n. sp. (Ecuador)

***Diariptus hexacanthus* Stål**

(Figs. 1, 5, 9–10)

Diariptus hexacanthus Stål, 1859: 452.

Diariptus nigridens Stål, 1870: 128. **nov. syn.**

Redescription. Male. Head length 1.94; width across eyes 2.54; interocular space 1.50; interocellar space 0.70; preocular distance 1.38; antennal segments length I, 4.52, II, 3.59, III, 2.48, IV, 5.12; pronotum length 4.89; width across humeral angles 6.38; scutellar length 2.79; width 2.51; total body length 24.90.

Coloration. Ground color yellow; antennal segment I dull orange, II to IV shiny orange; base and apex of scutellum yellowish cream; following areas black: apex of rostral segment IV, spines and tubercles of femora and tibiae, and posterior angle of connexival segments III to VI including the spine; mesosternum, metasternum, and metathoracic peritreme including evaporative area tinged with yellowish orange; hemelytral membrane ambarine, translucent; hind tibia basally dark orange. Structure. Scutellum. Longer than wide (Fig. 1). Abdomen. Connexival segments IV and V with posterior angle produced into long, broadly based spine, perpendicular to abdominal margin and rather slender, and VI produced into short and robust spine obliquely posteriad (Fig. 5). Paramere. Body elongate, narrowed (Figs. 9–10).

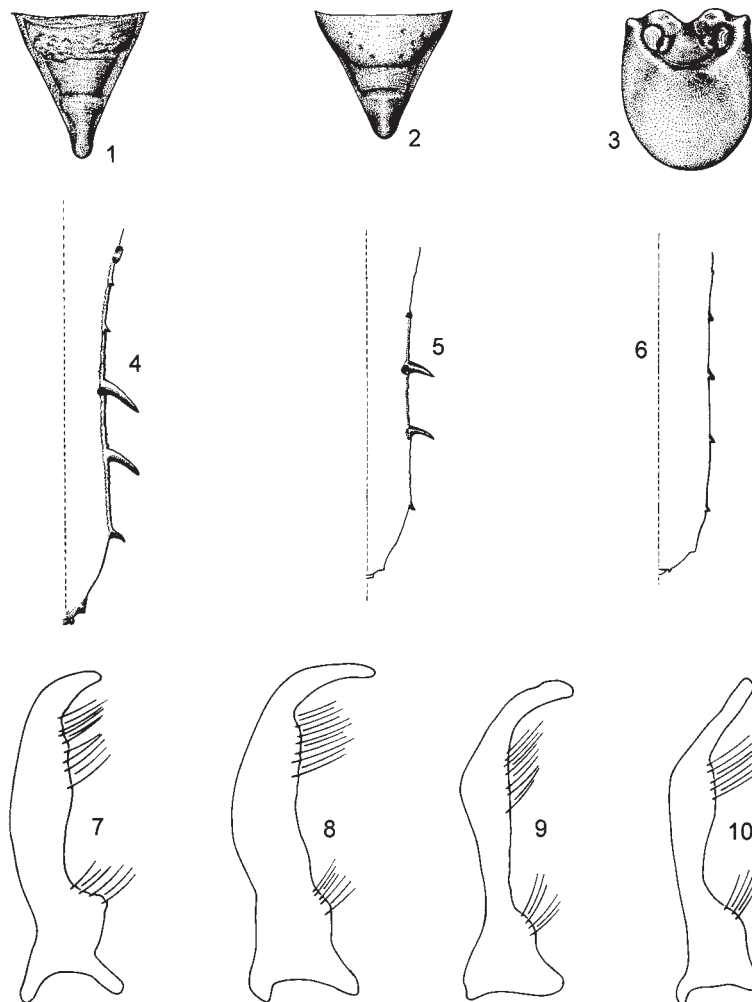


FIGURE 1–10. *Diariptus* spp. 1–2. Scutellum. 1. *Diariptus hexacanthus* Stål. 2. *Diariptus napoanus* n. sp. 3. Caudal view of male genital capsule of *Diariptus napoanus* n. sp. 4–6. Abdomen. 4. *Diariptus napoanus* n. sp. (male). 5. *Diariptus hexacanthus* Stål (male). 6. *Diariptus napoanus* n. sp. (female). 7–10. Paramere. 7–8. *Diariptus napoanus* n. sp. 9–10. *Diariptus hexacanthus* Stål.

Female. Head length 1.79; width across eyes 2.31; interocular space 1.48; interocellar space 0.74; preocular distance 1.19; antennal segments length I, 4.65, II, 3.41, III, 2.29, IV, 5.02; pronotum length 4.89; width across humeral angles 6.08; scutellar length 2.85; width 2.51; total body length 24.38. Coloration similar to male. Connexival segments VIII and IX, dorsal abdominal segments VIII and IX, and genital plates yellow. Structure. Abdomen. Posterior angle of connexival segments IV and V produced into short spine, directed outward or slightly obliquely posteriad.

Variation. Spines and tubercles of femora and tibiae yellow with apex black.

Type material examined. *Diariptus hexacanthus*: TYPE: male, Brazil, Cameta, Sieber (ZMHB). *Diariptus nigridentis*: HOLOTYPE: female, Brazil, Amazon, Stevens (NHRS).

Additional material examined. New records. BRAZIL: 1 female, Mato Grosso, Sinop, 12°31'S–55°37'W, X-1974, M. Alvarenga (AMNH); 2 males, Santarem, VI-1919, S. M. Klages (CMNH); 1 female, Sao Paulo de Olivenca, IV-1023, S. M. Klages (CMNH); 1 male, 1 female, Para, Itaituba, Rio Tapajoz, (without date), Dirings (MZSP); 1 male, Para, Tirios, Alto Parú d' Oeste, 1-II-1963, Machado and Pereira (UNAM); 1 female, Para, Itaituba, Parque Nacional Amazonia, 13-XI-1978, R. B. Neto (UNAM).

Distribution. Known only from Brazil.

Diariptus napoanus n. sp.

(Figs. 2–4, 6–8, 11)

Description. Holotype male. Head length 1.94; width across eyes 2.48; interocular space 1.50; interocellar space 0.74; preocular distance 1.38; antennal segments length I, 5.39, II, 4.15, III, 2.91, IV, 4.96; pronotum length 5.20; width across humeral angles 7.10; scutellar length 2.48; width 2.79; total body length 26.40. Dorsal coloration. Head and pronotum pale yellow; antennal segments I to III brownish, suffused with dark yellowish orange marks, and IV shiny orange; scutellum pale yellow, basally and apically creamy orange; clavus dark yellowish orange with anal border and claval commissure black; corium dark yellowish orange; hemelytral membrane ambarine, translucent; connexival segments dark yellowish orange with posterior angle including the spine black; dorsal abdominal segments pale yellow, suffused with shiny orange marks. Ventral coloration.- Ground color yellow with following areas black: apex of rostral segment IV, and spines and tubercles of femora and tibiae; mesosternum, metasternum, and metathoracic peritreme suffused with dark orange; hind tibia yellow with basal third dark orange; abdominal sterna III to VII lateral to midline and below abdominal spiracles with wide reddish orange stripe. Structure. Scutellum. Wider than long (Fig. 2). Abdomen. Connexival segments IV and V with posterior angle drawn out into remarkable long, broadly based spine, almost perpendicular to abdominal margin and rather robust, and VI produced into medium size and robust spine, obliquely posteriad (Fig. 4). Genital capsule. Posteroventral edge with deep U-shaped excavation (Fig. 3). Paramere. Body elongate and robust (Figs. 7–8).

Female. Head length 1.67; width across eyes 2.29; interocular space 1.36; interocellar space 0.62; preocular distance 1.24; antennal segments length I, 4.27, II, 3.41, III, 2.35, IV, 4.52; pronotum length 4.46; width across humeral angles 6.01; scutellar length 2.17; width 2.35; total body length 22.86. Coloration similar to male holotype. Connexival segments VIII and IX yellow with posterior angle pale brown; dorsal abdominal segments VIII and IX, and genital plates dark yellow. Structure. Abdomen. Connexival segments IV and V drawn out into short, broadly based spines, obliquely posteriad (Fig. 6).

Variation. 1. Antennal segment I brown with basal third yellow. 2. Antennal segments II and III dark orange and IV shiny orange. 3. Fore and middle legs yellow with olivaceous marks. 4. Spines and tubercles of femora and tibiae yellow with apex black. 5. Clavus and corium pale yellowish orange, tinged with greenish at costal margin and claval commissure.

Types. Holotype male, **ECUADOR:** Napo, 20 km E of Puerto Napo, Aliñahui, 450 m, 01°03'S–

77°40'W, XI-1996, E. S. Ross (CASC). **Paratypes. ECUADOR:** 1 female, Napo, 20 km E. of Puerto Napo, Aliñahui, 450 m, 01°03'S-77°40'W, XI-1996, E. S. Ross (CASC); 2 males, Napo, Puerto Napo, Ahuano, 450 m, 31-VIII-1991, Amedegnato and Poulain (MNHN, UNAM).

Distribution. Known only from Ecuador.

Etymology. Named for its occurrence in Napo, Ecuador.

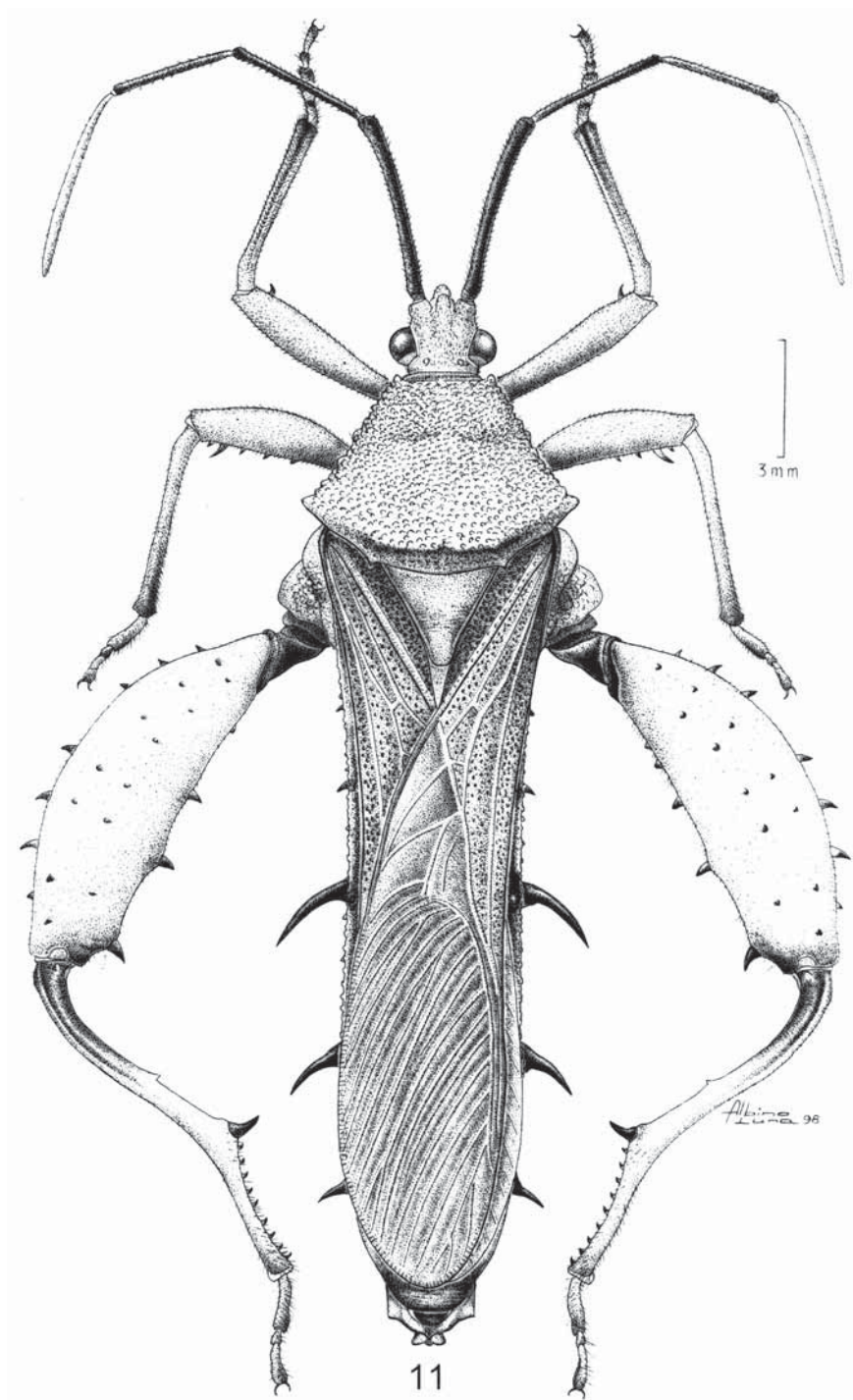


FIGURE 11. Dorsal view of *Diariptus napoanus* n. sp. (male).

Acknowledgments

I wish like to thank the following individuals and institutions for loans of specimens and other assistance: Randall T. Schuh (AMNH); Vincent Lee and Norman D. Penny (CASC); John Rawlins and Robert Davidson (CMNH); Dominique Pluot (MNHN); Sonia Casari (MZSP); Bert Viklund (NHRS); Jürgen Deckert (ZMHB). Special thank to Ernesto Barrera (UNAM) and Albino Luna (UNAM) for the preparation of the illustrations. Comments on the manuscript from Oscar Francke (UNAM) and two anonymous reviewers are greatly appreciated.

References

- Bergroth, E. (1912) Notes on Coreidae and Neididae. *Annales de la Société Entomologique de Belgique* 66, 76–93.
- Brailovsky, H. & Barrera, E. (1998) A new genus, two new species, and synonymical notes on the tribe Spathophorini (Heteroptera: Coreidae: Meropachydinae), with a key to genera of the tribe. *Proceedings of the Entomological Society of Washington*, 108, 746–754.
- Kormilev, A.A. (1954) Notas sobre Coreidae Neotropicales II; (Hemiptera) Merocorinae de la Argentina y países limitrofes. *Revista Ecuatoriana de Entomología y Parasitología*, 2, 153–187.
- Lehierry, L. & Severin, G. (1894) *Catalogue Général des Hémiptères – II. Hétéroptères*. Bruxelles, 277pp.
- Stål, C. (1859) Till kännedomen om Coreida. *Öfversigt af Kongliga Vetenskaps Akademiens Förhandlingar, Stockholm* 16, 449–476.
- Stål, C. (1870) Enumeratio Hemipterorum. Hemiptera. 1. *Kongliga Svenska Vetenskaps Akademiens Handlingar* 9, 1–232.